

# BEFORE THE BOARD OF OIL, GAS AND MINING DEPARTMENT OF NATURAL RESOURCES STATE OF UTAH

IN THE MATTER OF THE REQUEST FOR AGENCY ACTION OF FINLEY RESOURCES INC. FOR AN ORDER ESTABLISHING 40-ACRE **DRILLING UNITS** FOR THE **PRODUCTION** OF OIL, GAS AND ASSOCIATED HYDROCARBONS FROM THE EOCENE MIDDLE AND LOWER GREEN RIVER AND PORTIONS OF THE PALEOCENE WASATCH TRANSITIONAL FORMATIONS UNDERLYING SECTIONS 13, 16, 21, 22 AND THE N½ OF SECTION 27, TOWNSHIP 4 SOUTH, RANGE 1 EAST, USM, UINTAH COUNTY, UTAH, AND AUTHORIZING UP TO FOUR (4) PRODUCING WELLS ON EACH SUCH DRILLING UNIT SO ESTABLISHED

# [PROPOSED] FINDINGS OF FACT, CONCLUSIONS OF LAW AND ORDER

Docket No. 2014-042

Cause No. 239-03

This Cause came on for hearing before the Utah Board of Oil, Gas and Mining (the "Board") on Wednesday, December 10, 2014, at approximately 1:10 p.m. in the Auditorium of the Utah Department of Natural Resources Building in Salt Lake City. The following Board members were present and participated at the hearing: Chairman Ruland J. Gill, Jr., Susan S. Davis, Gordon L. Moon, Chris D. Hansen, Carl F. Kendell, Kelly L. Payne and Michael R. Brown. The Board was represented by Michael S. Johnson, Esq., Assistant Attorney General.

Testifying on behalf of Petitioner Finley Resources Inc. ("Finley") were Zachary Archer – Landman, Tom Duncan – Geologist and Exploration and Development Manager,

and Brandon Neely – Reservoir Engineer. Mr. Duncan and Mr. Neely were recognized by the Board as experts in geology and petroleum engineering, respectively, for purposes of this Cause. Seth A. Loughmiller, Esq. and Frederick M. MacDonald, Esq., of and for MacDonald & Miller Mineral Legal Services, PLLC, appeared as attorneys for Finley.

The Utah Division of Oil, Gas and Mining (the "Division") elected not to file a Staff Memorandum in this Cause, but participated in the hearing. Steven F. Alder, Esq., Assistant Attorney General, appeared as attorney for the Division. At the conclusion of Finley's presentation in-chief, Mr. Alder made a statement indicating the Division had no objection to the granting of Finley's Request for Agency Action filed on October 20, 2014 in this Cause (the "Request"), as conformed to the testimony and other evidence provided at the hearing.

Crescent Point Energy U.S. Corporation ("Crescent Point"), an owner of leaseholds in a portion of lands adjacent to the lands at issue, originally filed an objection to the Request but subsequently withdrew the objection on December 8, 2014.

No other party filed a response to the Request, and no other party appeared or participated at the hearing.

The Board, having considered the testimony presented and the exhibits received into evidence at the hearing, being fully advised, and for good cause, hereby makes the following findings of fact, conclusions of law and order in this Cause.

#### **FINDINGS OF FACT**

- 1. Finley is a Texas corporation with its principal place of business in Fort Worth, Texas. Finley is duly qualified to conduct business in the State of Utah, and is fully and appropriately bonded with all relevant Federal and State of Utah agencies.
- 2. The following Uintah County lands were, at the time the Request was filed, not subject to any spacing order of the Board, and therefore, were subject to the Board's and Division's general operational rules, including Utah Admin. Code Rule R649-3-2 (the general well siting rule), which requires wells to be located in the center of a quarter-quarter section with a tolerance of 200 feet (an allowed 400-foot square "window"):

## Township 4 South, Range 1 East, USM

Section 13: All

Section 16: All

Section 21: All

Section 22: All

Section 27: N<sup>1</sup>/<sub>2</sub>

(collectively the "Subject Lands"). The Subject Lands and the surrounding area comprise what Finley refers to as the "Leland Bench" area.

3. The Eocene Middle and Lower Green River and the upper 500 feet of the Paleocene Wasatch transitional formations are defined for purposes of this Cause as follows:

The interval between the Garden Gulch top (TGR<sub>3</sub>) and approximately 500 feet into the Paleocene Wasatch, the stratigraphic equivalent of which is the interval between 4,919 feet and 7,526 feet on the log for the Finley Resources Ute 22-6A-4-1 Well, located in the SE½NW¼ of Section 22, T4S, R1E, USM, Uintah County, Utah (API No. 43-047-53545),

# (the "Subject Formations").

4. The oil, gas and associated hydrocarbons underlying the Subject Lands, as relevant to the Subject Formations, are entirely owned by the United States, in Trust for the Ute Indian Tribe. All of the Subject Lands as relevant to the Subject Formations are under lease to Finley as follows:

Lease	Lands (All in T4S, R1E, USM)
BIA No. 14-20-H62-4896	Sec. 13: All
BIA No. 14-20-H62-4899	Sec. 16: All
BIA No. 14-20-H62-4900	Sec. 21: All
BIA No. 14-20-H62-4901	Sec. 22: All
BIA No. 14-20-H62-4906	Sec. 27: N½

- 5. In accordance with the general well siting rule, Finley operates 72 wells on the Subject Lands and throughout the Leland Bench area, all of which have been completed as producing oil wells from the Subject Formation.
- 6. The Green River Formation contains almost every sedimentary rock type within an open to marginal lacustrine environment. This includes deep water to shallow

water limestones, dolomites to fluvial/deltaic channels, distributory and bar sandstones, as well as organic rich shales and dolomitic sandstones. The Wasatch Formation is dominantly alluvial red beds, fluvial fan deltas, and shales. Average porosities in the Green River limestones and dolomites are 8% to 12% and occasionally up to 15%, with average permeability of ~0.05 mD to 3 mD. Sandstones in the Green River exhibit average porosities between 9% and 17% with permeabilities ranging from 0.4 mD to 13 mD. Additionally, average porosity in the Wasatch is less than 8%, with an average permeability of less than 0.05 mD. The upper 500 feet of the Wasatch formation should be included because: (a) Given its depositional and discontinuous nature in the Leland Bench area, no wells would be drilled to produce solely therefrom; thus, additional resources will be recovered that would otherwise be left in the ground and prevent waste; and (b) drilling economics deter drilling deeper than 500 feet into the Wasatch formation.

7. Completion results indicated an average estimated ultimate recovery per well in excess of 87.2 MBO across Finley's Leland Bench acreage. Using petrophysical software and decline curve analysis, Finley was able to derive estimates of Stock Oil in Place ("STOIP" or "OIP"), and Estimated Ultimate Recoveries ("EUR") from wells and production data existing in the Leland Bench area. STOIP calculated from the Leland Bench area range between 3.3 MMBOIP per 40 acres in Section 23 and 4.8 MMBOIP per 40 acres in Section 13, with an average STOIP per section for the Leland Bench area of

66 MMBOE. Finley believes an 8% recovery factor is close to an average for the reservoirs completed in the Subject Formation in the Leland Bench area. This is based on public data as well as estimates previously provided to the Board by other operators. The 8% recovery factor indicates that a drilling density of 10 acres is optimal to prevent waste because Finley would only recover between ~1.4% and ~2.9% of the oil in place if it were allowed to drill only one well per 40 acres. This means that between 3.4 MMBO and 4.3 MMBO per section will not be produced if only 16 wells are drilled in each section.

- 8. The evidence and testimony provided indicate that wells on 10-acre density pattern would likely not be in communication or create substantial interference with other wells producing from the Subject Formations.
- 9. The evidence and testimony provided indicate that most wells drilled on 10-acre density pattern and producing from the Subject Formations would be economic. However, not every 40-acre drilling unit can economically support four wells. Economics will be affected by reservoir performance, drainage, interference, and most significantly by oil prices. Additionally, elliptical drainage patterns are, at best, unpredictable, and interference will vary from well to well. Consequently, establishment of 40-acre drilling units and allowing up to four (4) wells to be drilled and produce from the Subject Formations, rather than establishing 10-acre drilling units, is fair, just and reasonable under the circumstances.

- 10. The drilling units should be comprised of quarter-quarter sections (or substantial equivalent combination of lots) with authorization for the drilling and production of up to four (4) wells on each drilling unit so established; provided, however, that the productive interval of any well may not be located closer than 330 feet to a shared drilling unit/lease boundary line, or 100 feet from a drilling unit boundary if the adjacent lands are within the same lease and have the same production interest owners. To the extent any productive interval of a directionally drilled well is outside of the setback set forth herein, Finley (or its successor operator(s)) must seek an exception location approval in accordance with Utah Admin. Code Rule R649-3-3 (or subsequently enacted equivalent regulation).
- 11. The creation of 40-acre drilling units with up to four producing wells per Unit will help facilitate use of multi-well pads when technically and economically feasible, and thereby will minimize surface impacts.
- 12. Because the Findings outlined in Findings of Fact Nos. 8 through 10 are preliminary in nature, the Board deems it necessary to receive confirmatory data. Therefore, within a reasonable time after analysis of the results of the drilling authorized herein, but in any event, not more than two years after entry of this Order, Finley (or its successor operator(s)) must report back to the Board on the results, and in particular, if the data is consistent with the findings outlined in Findings of Fact Nos. 8 through 10 above.

This reporting requirement will be met by filing a written report with the Division and Board and may require a follow-up oral report at the discretion of the Board. Said report shall be entitled to all confidentiality protections allowed under the Government Records Access and Management Act (Utah Code Ann. §63G-2-101 et seq.) upon Finley's (or successor operator(s)') compliance therewith.

- 13. A copy of the Request was mailed, postage pre-paid, certified with return receipt requested, and properly addressed to all mineral, leasehold and production interest owners in the Subject Lands, to the working interest owners and operators in the lands adjacent to the Subject Lands, and to the Bureau of Indian Affairs ("BIA") and the State and Vernal Field Office of the Bureau of Land Management ("BLM") as the governmental agencies having mineral jurisdiction over portions of the Subject Lands. The mailings were sent to said parties at their last addresses disclosed by the BIA, BLM and Uintah County records.
- 14. Notice of the filing of the Request and of the hearing thereon was duly published in the Sat Lake Tribune and Deseret Morning News on November 16, 2014 and in the Uintah Basin Standard and the Vernal Express on November 18, 2014.
- 15. The vote of the Board members present and participating in the hearing on this Cause was unanimous (7-0) in favor of granting the Request with the reporting requirement outlined in Findings of Fact No. 12 above.

# **CONCLUSIONS OF LAW**

- 1. Due and regular notice of the time, place and purpose of the hearing was properly given to all parties whose legally protected interests are affected by the Request in the form and manner as required by law and the rules and regulations of the Board and Division.
- 2. The Board has jurisdiction over all matters covered by the Request and all interested parties therein, and has the power and authority to render the order, herein set forth, pursuant to Utah Code Ann. §§40-6-5(3)(b) and 40-6-6 and Utah Admin. Code Rule R649-2-1(2).
- 3. The Subject Formations, as defined in Findings of Fact No. 3 above, constitute a "common source of supply" as that phrase is defined in Utah Code Ann. §40-6-2(19).
- 4. The drilling units for the Subject Formations set forth above are not smaller than the maximum area drained by one well on 10-acre density.
- 5. A 10-acre well density is required to efficiently and economically drain the respective drilling units.
- 6. The establishment of 40-acre drilling units with up to four (4) wells per drilling unit, with the provision outlined in Findings of Fact No. 12 above, is fair, reasonable and justified under the circumstances. Additionally, the establishment of well

setbacks of 330 feet from a shared drilling unit/lease boundary line and 100 feet if the adjacent lands are within the same lease and have the same production interest owners is protective of correlative rights and with the provision outlined in Findings of Fact No. 12 above, is fair, reasonable and justified under the circumstances.

- 7. The Board has the authority under Utah Admin. Code Rule R649-2-1(2) to modify the requirements of Utah Admin., Code Rule R649-3-11(1.1).
- 8. Finley has demonstrated good cause as to why Utah Code Rule R649-3-11(1.1) should be declared inapplicable to directionally drilled wells so long as the point of intersection is within the setbacks referenced in Conclusion of Law No. 6 above. All parties with "legally protected interests" impacted thereby were provided notice of the Request and hearing.
- 9. The relief granted hereby will result in consistent and orderly development and the greatest recovery of oil, gas and associated hydrocarbons from the Subject Formations underlying the Subject Lands, prevent waste and adequately protect the correlative rights of all affected parties.
- 10. Finley has sustained its burden of proof, demonstrated good cause, and satisfied all legal requirements for the granting of the Request with the Board's requested condition.

## <u>ORDER</u>

Based upon the Request, testimony and evidence submitted, and the Findings of Fact and Conclusions of Law stated above, the Board hereby orders:

- 1. The Request in this Cause, as conformed to the testimony and other evidence provided at the hearing, is granted with the reporting requirement outlined in No. 4 below.
- 2. 40-acre (or substantially equivalent lots or a combination of lots and quarter-quarter sections) drilling units for the production of oil, gas and associated hydrocarbons from the Subject Formations (as defined above) for the Subject Lands (as defined above), with up to four (4) producing wells on each such unit (to equate to approximate 10-acre well density) authorized, are hereby established. However, no well may be located closer than 330 feet to a shared drilling unit/lease boundary line and no closer than 100 feet if the adjacent lands are within the same lease and have the same production interest owners, without an exception location approval in accordance with Utah Admin. Code Rule R649-3-3 (or subsequently enacted equivalent regulation).
- 3. Utah Admin. Code Rule R649-3-11(1.1) is hereby declared inapplicable to any directionally drilled well on the drilling units, so established, as long as the point of intersection with the Subject Formations, all productive intervals and bottom hole locations, are within the setbacks so established. However, if an uphole completion closer than the setback is subsequently proposed, an exception location approval in accordance

with Utah Admin. Code Rule R649-3-3 (or subsequently enacted equivalent regulation) will be required.

- 4. Within a reasonable time after analysis of the drilling results, but in any event, not more than two years after entry of this Order, Finley (or its successor operator(s)) must report back to the Board on the available results, and in particular if the data is consistent with the findings outlined in Findings of Fact Nos. 8 through 10 above. This reporting requirement will be met by filing a written report with the Division and the Board and may require a follow-up oral report at the discretion of the Board. Said report shall be entitled to all confidentiality protections allowed under the Government Records Access and Management Act (Utah Code Ann. §63G-2-101 et seq.) upon Finley's (or its successor operator(s)') compliance therewith.
- 5. Pursuant to Utah Admin. Code Rule R641 and Utah Code Ann. §63G-4-204 to 208, the Board has considered and decided this matter as a formal adjudication.
- 6. This Order is based exclusively on evidence of record in the adjudicative proceedings or on facts officially noted, and constitutes the signed written Order stating the Board's decision and the reasons for the decision, all as required by the Administrative Procedures Act, Utah Code. Ann §63G-4-208 and Utah Administrative Code Rule R641-109.

- Request Board Reconsideration. As required by Utah Code Ann. §63G-4-208(e) (g), the Board hereby notifies all parties in interest that they have the right to seek judicial review of this final Board Order, in this formal adjudication, by filing a timely appeal with the Utah Supreme Court within 30 days after the date that this Order issued. Utah Code Ann. §§63G-4-401(3)(a) and 403. As an alternative to seeking immediate judicial review, and not as a prerequisite to seeking judicial review, the Board also hereby notifies parties that they may elect to request that the Board reconsider this Order, which constitutes a final agency action of the Board. Utah Code Ann. §63G-4-302, entitled, "Agency Review Reconsideration," states:
  - (1)(a) Within 20 days after the date that an order is issued for which review by the agency or by a superior agency under Section 63G-4-301 is unavailable, and if the order would otherwise constitute final agency action, any party may file a written request for reconsideration with the agency, stating the specific grounds upon which relief is requested.
  - (b) Unless otherwise provided by statute, the filing of the request is not a prerequisite for seeking judicial review of the order.
  - (2) The request for reconsideration shall be filed with the agency and one copy shall be sent by mail to each party by the person making the request.
  - (3)(a) The agency head, or a person designated for that purpose, shall issue a written order granting the request or denying the request.
  - (b) If the agency head or the person designated for that purpose does not issue an order within 20 days after the filing of the request, the request for reconsideration shall be considered to be denied.

*Id.* The Board also hereby notifies the parties that Utah Admin. Code Rule R641-110-100, which is part of a group of Board rules entitled, "Rehearing and Modification of Existing Orders," states:

Any person affected by a final order or decision of the Board may file a petition for rehearing. Unless otherwise provided, a petition for rehearing must be filed no later than the 10<sup>th</sup> day of the month following the date of signing of the final order or decision for which the rehearing is sought. A copy of such petition will be served on each other party to the proceeding no later than the 15<sup>th</sup> day of the month.

Id. See Utah Admin. Code Rule R641-110-200 for the required contents of a petition for Rehearing. If there is any conflict between the deadline in Utah Code Ann. §63G-4-302 and the deadline in Utah Admin. Code Rule R641-110-100 for moving to rehear this matter, the Board hereby rules that the later of the two deadlines shall be available to any party moving to rehear this matter. If the Board later denies a timely petition for rehearing, the party may still seek judicial review of the Order by perfecting a timely appeal with the Utah Supreme Court within 30 days thereafter.

The Board retains continuing jurisdiction over all the parties and over the subject matter of this cause, except to the extent said jurisdiction may be divested by the filing of a timely appeal to seek judicial review of this order by the Utah Supreme Court.

For all purposes, the Chairman's signature on a faxed copy of this Order shall be deemed the equivalent of a signed original.

Dated this day of	, 20
	STATE OF UTAH BOARD OF OIL, GAS AND MINING
	By: Ruland J. Gill, Jr., Chairman

1075.10

#### **CERTIFICATE OF SERVICE**

I hereby certify that on this 17th day of December, 2014, I caused a true and correct copy of the foregoing *Proposed* Findings of Fact, Conclusions of Law and Order to be mailed, postage pre-paid, and sent electronically to the following:

Michael S. Johnson, Esq.
Assistant Attorney General
Attorney for the Board of Oil, Gas
and Mining
1594 West North Temple, Suite 300
P.O. Box 145801
Salt Lake City, UT 84114-5801
E-Mail: mikejohnson@utah.gov

Steven F. Alder, Esq.
Assistant Attorney General
Attorney for the Utah Division of
Oil, Gas and Mining
1594 West North Temple, Suite 300
P.O. Box 145801
Salt Lake City, UT 84114-5801
E-Mail: stevealder@utah.gov

Mr. John Rogers
Associate Director - Oil & Gas
Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 300
P.O. Box 145801
Salt Lake City, UT 84114-5801
E-Mail: johnrogers@utah.gov

Seth A. Loughmiller, Esq.